

Jan 59

CALIFORNIA FOREST AND RANGE EXPERIMENT STATION  
FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE

MOUNTAIN PINE BEETLE  
BRIDALVEIL CREEK AND MONO MEADOWS  
YOSEMITE NATIONAL PARK  
APPRAISAL SURVEY  
AUGUST 1958

By Galen C. Trostle, Entomologist

Introduction

In answer to a request from the Yosemite Park Forester, John Mahoney, a reconnaissance was made of the Bridalveil Creek and Mono Meadows areas (see map) in Yosemite National Park on August 15 and 16, 1958. G.C. Trostle and R. Rennie accompanied Mr. Mahoney on an inspection of the lodgepole pine in these two areas. The mountain pine beetle was found to be active in both areas.

The first report of mountain pine beetle activity in this area was made in 1918, but the losses then and in subsequent years were not considered serious enough to warrant control until 1937.<sup>1/</sup> Losses continued to be reported through 1946 but little control was warranted. No report on the infestation in either of these areas has been made since 1950.

This year the Bridalveil area has taken on new importance with the improvement of the camping facilities on Bridalveil Creek. The only timber species in and around the camp area to provide protection, shade, and aesthetic enjoyment for the campers and hikers is the lodgepole pine. Many auto travelers also enjoy the view of these pines adjacent to the Glacier Point road.

Insect and Host Species

This survey is concerned with the mountain pine beetle, Dendroctonus monticolae Hopk. infesting lodgepole pine. This bark beetle probably causes more loss to lodgepole pine than any other insect. In other areas in the Park, the mountain pine beetle has been associated with lodgepole weakened by lodgepole needle miner defoliation. However, no evidence was seen in either Mono Meadows or Bridalveil Creek of needle miner damage.

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<sup>1/</sup> Patterson, J.E. The 1940 Forest insect survey of Yosemite National Park. Calif. Forest & Range Exp. Sta., Berkeley, Calif. Feb. 19, 1941 (Bureau of Ent. and Plant Quarantine).

### Infested Area

An appraisal was made of four areas of approximately 1,000 acres each which contained red tops: 1. Bridalveil campground; 2. south Bridalveil area on the Ostrander Lake trail south of the campground; 3. North Bridalveil area north of the Glacier Point road opposite the campground; 4. Mono Meadow area (see map). The first three areas are in the Bridalveil Creek control unit, and the fourth is in the Mono Meadows control unit as they were designated in 1951. All areas are within 1-1/2 miles of the Glacier Point road, at about 7,000-foot elevation. The south area #2 was viewed from a point which is about a mile south on a fire road, at approximately the quarter corner between sections 19 and 30, T3S, R22E.

### Status of the Infestation

The mountain pine beetle appeared to be making rapid progress into the Bridalveil camp area. In the process of recent camp improvement several green trees were cut, bucked into bolts and piled for the campers' use. Several standing trees near road improvement were root-damaged or had the bark knocked off. Both the cut logs and the damaged trees were soon attacked by this bark beetle. About a dozen standing trees were found to contain current broods. Infested trees were 16 to 30 inches d.b.h. and overmature. Both the attacks and the broods were abundant. Infested trees were not associated with any past loss and did not occur in groups, but were scattered about the improved area and most had been damaged. The piles of green lodgepole bolts had been attacked soon after they were cut. The decks were sprayed with ethylene dibromide and excellent control was obtained. At the time of this inspection, about 2 weeks later, new attacks were being established in the green portions of these bolts.

The second area south of the campground contained about 4 groups of dead and dying lodgepole. In and around one group, 8 trees were currently infested, but none were found near the other three groups. One group of about 4 trees was found not associated with any older kill.

The area number 3 north of the road opposite the campground had considerable current loss. A meandering strip was run from the road down to the creek and back to the road. The area around recently killed groups was checked and every effort made to search out infested trees. Approximately 65 currently infested trees were located on 50 acres. Infested trees were almost always found in groups of 4 or more, usually not in association with older loss. The stand is overmature, close growing, with little or no underbrush. This area contained the most aggressive infestation found during the survey.

About 3 groups of 20 or more dying and dead lodgepole were seen from the road above Mono Meadows. On close examination it was found that the current loss was not significantly greater than it has been for several



years. The annual loss of mature trees from mountain pine-beetle attacks appears to have been replaced by growth of the younger trees, for the 20 years of infestation does not appear to have depleted the stand.

### Discussion

Treatment of infested trees in the camping area should probably be carried on annually. The overmature nature of the stand makes it particularly vulnerable to insect loss. If a forest cover is to be maintained for the camp, a maintenance control program should be planned. Any green trees which are cut in the future should be removed or peeled.

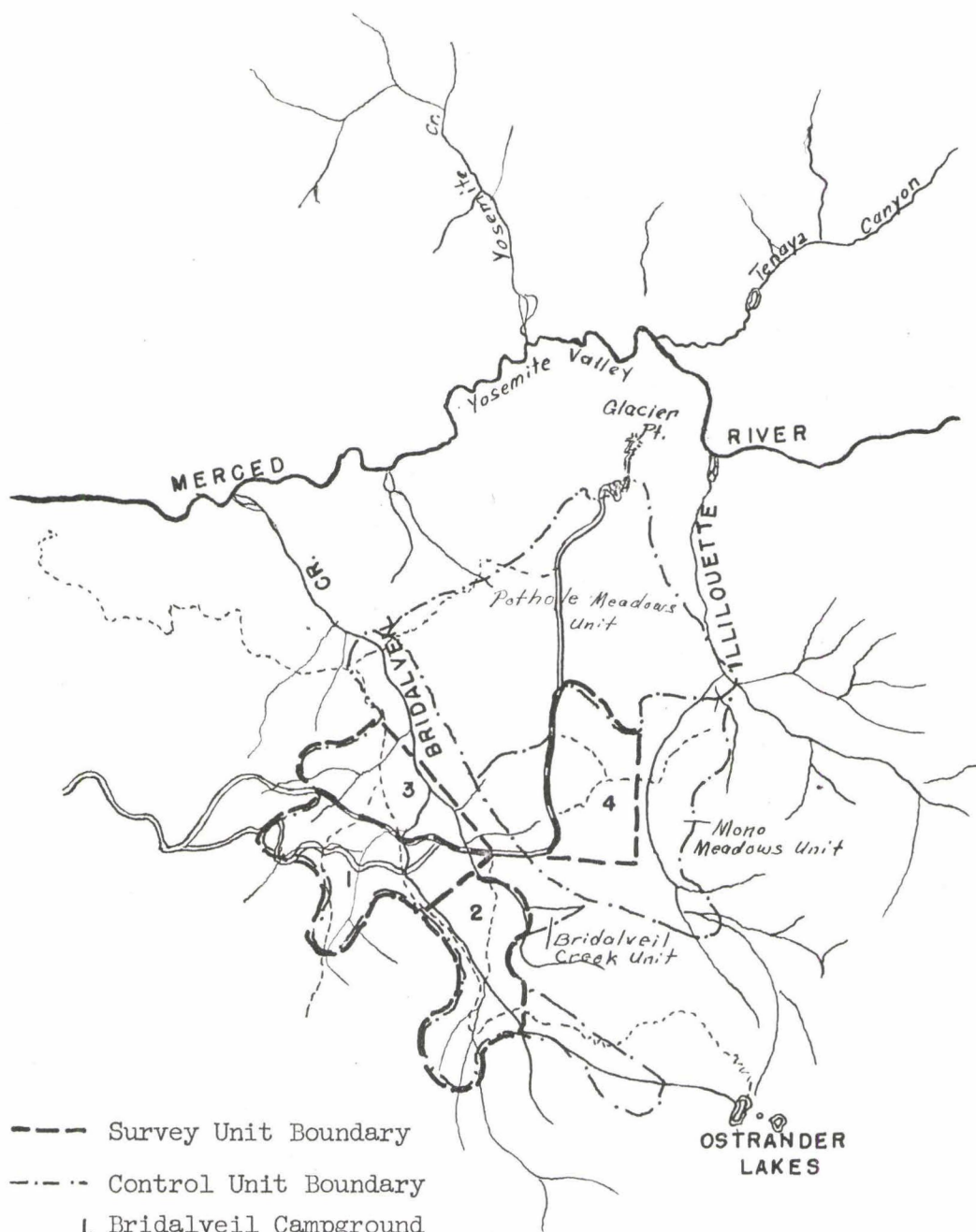
Infested trees south of the campground are not close enough to the camp area to be considered a serious hazard to that area. Likewise, they are not serious enough to constitute a real hazard to the stands in which they occur. Losses may fluctuate from year to year, but unless a considerable increase occurs no serious stand damage should be expected.

North of the road the situation is quite different. Bark beetles from infested trees in this area could easily travel to the campground area. The old mature stand contains very little reproduction to replace current loss. Group-killing not adjoining previous brood trees indicates a tendency for the infestation to travel and expand. From this examination, it seems advisable to at least conduct a more complete appraisal of this area next year.

The lodgepole stand around the Mono Meadows is similar to the area south of the campground and quite typical of most of the stands in the Sierra. Little competition from other species permits the lodgepole to perpetuate its species. The stand is mixed so that thrifty trees rapidly replace any overmature trees which die out, providing catastrophes do not occur. Mountain pine beetles working in stands such as these may kill a number of trees over the years, yet their work does not seem to make any visible change in the stand. Losses in the Mono Meadows are not expected to destroy the stand or cause any appreciable change in the vista as viewed from the road.

January 1959  
Berkeley, California

Attachment



Scale  $\frac{1}{125000}$

Appraisal Survey Area of  
Bridalveil Creek and Mono Meadows Areas  
Yosemite National Park  
1958